

## SEQUENCE LISTING

<110> INCYTE PHARMACEUTICALS, INC.

BANDMAN, Olga  
HILLMAN, Jennifer L.  
TANG, Y. Tom  
LAL, Preeti  
CORLEY, Neil C.  
GUEGLER, Karl J.  
GORONE, Gina A.  
BAUGHN, Mariah R.

<120> HUMAN OXIDOREDUCTASE PROTEINS

<130> PF-0544 PCT

<140> To Be Assigned

<141> Herewith

<150> 60/091,177

<151> 1998-06-30

<160> 14

<170> PERL Program

<210> 1

<211> 310

<212> PRT

<213> Homo sapiens

<220>

<221> misc\_feature

<223> Incyte Clone No: 321510

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Arg Leu Leu Arg Gly Gln Ser Val Gln Gln Val Gly Pro Gln Gly  
35 40 45  
Leu Leu Tyr Val Gln Gln Arg Glu Leu Ala Val Thr Ser Pro Lys  
50 55 60  
Asp Gly Ser Ile Ser Ile Leu Gly Ser Asp Asp Ala Thr Thr Cys  
65 70 75  
His Ile Val Val Leu Arg His Thr Gly Asn Gly Ala Thr Cys Leu  
80 85 90  
Thr His Cys Asp Gly Thr Asp Thr Lys Ala Glu Val Pro Leu Ile  
95 100 105  
Met Asn Ser Ile Lys Ser Phe Ser Asp His Ala Gln Cys Gly Arg  
110 115 120  
Leu Glu Val His Leu Val Gly Gly Phe Ser Asp Asp Arg Gln Leu  
125 130 135  
Ser Gln Lys Leu Thr His Gln Leu Leu Ser Glu Phe Asp Arg Gln  
140 145 150  
Glu Asp Asp Ile His Leu Val Thr Leu Cys Val Thr Glu Leu Asn

155	160	165
Asp Arg Glu Glu Asn Glu Asn His Phe Pro Val Ile Tyr Gly Ile		
170	175	180
Ala Val Asn Ile Lys Thr Ala Glu Ile Tyr Arg Ala Ser Phe Gln		
185	190	195
Asp Arg Gly Pro Glu Glu Gln Leu Arg Ala Ala Arg Thr Leu Ala		
200	205	210
Gly Gly Pro Met Ile Ser Ile Tyr Asp Ala Glu Thr Glu Gln Leu		
215	220	225
Arg Ile Gly Pro Tyr Ser Trp Thr Pro Phe Pro His Val Asp Phe		
230	235	240
Trp Leu His Gln Asp Asp Lys Gln Ile Leu Glu Asn Leu Ser Thr		
245	250	255
Ser Pro Leu Ala Glu Pro Pro His Phe Val Glu His Ile Arg Ser		
260	265	270
Thr Leu Met Phe Leu Lys Lys His Pro Ser Pro Ala His Thr Leu		
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Phe Ser Gly Asn Lys Ala Leu Leu Tyr Lys Lys Asn Glu Asp Gly		
290	295	300
Leu Trp Glu Lys Ile Ser Ser Pro Gly Ser		
305	310	

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<213> Homo sapiens

<220>  
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<223> Incyte Clone No: 634343

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Tyr Glu His Ala Val Ile Leu Pro Asn Lys Thr Glu Thr Pro Val			
35	40	45	
Ser Gln Glu Asp Ala Leu Asn Leu Met Asn Glu Asn Ile Asp Ile			
50	55	60	
Leu Glu Thr Ala Ile Lys Gln Ala Ala Glu Gln Gly Ala Arg Ile			
65	70	75	
Ile Val Thr Pro Glu Asp Ala Leu Tyr Gly Trp Lys Phe Thr Arg			
80	85	90	
Glu Thr Val Phe Pro Tyr Leu Glu Asp Ile Pro Asp Pro Gln Val			
95	100	105	
Asn Trp Ile Pro Cys Gln Asp Pro His Arg Phe Gly His Thr Pro			
110	115	120	
Val Gln Ala Arg Leu Ser Cys Leu Ala Lys Asp Asn Ser Ile Tyr			
125	130	135	
Val Leu Ala Asn Leu Gly Asp Lys Lys Pro Cys Asn Ser Arg Asp			
140	145	150	
Ser Thr Cys Pro Pro Asn Gly Tyr Phe Gln Tyr Asn Thr Asn Val			
155	160	165	

Val Tyr Asn Thr Glu Gly Lys Leu Val Ala Arg Tyr His Lys Tyr  
 170 175 180  
 His Leu Tyr Ser Glu Pro Gln Phe Asn Val Pro Glu Lys Pro Glu  
 185 190 195  
 Leu Val Thr Phe Asn Thr Ala Phe Gly Arg Phe Gly Ile Phe Thr  
 200 205 210  
 Cys Phe Asp Ile Phe Phe Tyr Asp Pro Gly Val Thr Leu Val Lys  
 215 220 225  
 Asp Phe His Val Asp Thr Ile Leu Phe Pro Thr Ala Trp Met Asn  
 230 235 240  
 Val Leu Pro Leu Leu Thr Ala Ile Glu Phe His Ser Ala Trp Ala  
 245 250 255  
 Met Gly Met Gly Val Asn Leu Leu Val Ala Asn Thr His His Val  
 260 265 270  
 Ser Leu Asn Met Thr Gly Ser Gly Ile Tyr Ala Pro Asn Gly Pro  
 275 280 285  
 Lys Val Tyr His Tyr Asp Met Lys Thr Glu Leu Gly Lys Leu Leu  
 290 295 300  
 Leu Ser Glu Val Asp Ser His Pro Leu Ser Ser Leu Ala Tyr Pro  
 305 310 315  
 Thr Ala Val Asn Trp Asn Ala Tyr Ala Thr Thr Ile Lys Pro Phe  
 320 325 330  
 Pro Val Gln Lys Asn Thr Phe Arg Gly Phe Ile Ser Arg Asp Gly  
 335 340 345  
 Phe Asn Phe Thr Glu Leu Phe Glu Asn Ala Gly Asn Leu Thr Val  
 350 355 360  
 Cys Gln Lys Glu Leu Cys Cys His Leu Ser Tyr Arg Met Leu Gln  
 365 370 375  
 Lys Glu Glu Asn Glu Val Tyr Val Leu Gly Ala Phe Thr Gly Leu  
 380 385 390  
 His Gly Arg Arg Arg Arg Glu Tyr Trp Gln Val Cys Thr Met Leu  
 395 400 405  
 Lys Cys Lys Thr Thr Asn Leu Thr Cys Gly Arg Pro Val Glu  
 410 415 420  
 Thr Ala Ser Thr Arg Phe Glu Met Phe Ser Leu Ser Gly Thr Phe  
 425 430 435  
 Gly Thr Glu Tyr Val Phe Pro Glu Val Leu Leu Thr Glu Ile His  
 440 445 450  
 Leu Ser Pro Gly Lys Phe Glu Val Leu Lys Asp Gly Arg Leu Val  
 455 460 465  
 Asn Lys Asn Gly Ser Ser Gly Pro Ile Leu Thr Val Ser Leu Phe  
 470 475 480  
 Gly Arg Trp Tyr Thr Lys Asp Ser Leu Tyr Ser Ser Cys Gly Thr  
 485 490 495  
 Ser Asn Ser Ala Ile Thr Tyr Leu Leu Ile Phe Ile Leu Leu Met  
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 Ile Ile Ala Leu Gln Asn Ile Val Met Leu  
 515 520

<210> 3  
 <211> 349  
 <212> PRT  
 <213> Homo sapiens

<220>  
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<223> Incyte Clone No: 1942326

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20 25 30  
Asn Phe Val Lys Leu Gln Val Lys Ala Cys Ala Leu Ser Gln Ile  
35 40 45  
Asn Thr Lys Leu Leu Ala Glu Met Lys Met Lys Lys Asp Leu Phe  
50 55 60  
Pro Val Gly Arg Glu Ile Ala Gly Ile Val Leu Asp Val Gly Ser  
65 70 75  
Lys Val Ser Phe Phe Gln Pro Asp Asp Glu Val Val Gly Ile Leu  
80 85 90  
Pro Leu Asp Ser Glu Asp Pro Gly Leu Cys Glu Val Val Arg Val  
95 100 105  
His Glu His Tyr Leu Val His Lys Pro Glu Lys Val Thr Trp Thr  
110 115 120  
Glu Ala Ala Gly Ser Ile Arg Asp Gly Val Arg Ala Tyr Thr Ala  
125 130 135  
Leu His Tyr Leu Ser His Leu Ser Pro Gly Lys Ser Val Leu Ile  
140 145 150  
Met Asp Gly Ala Ser Ala Phe Gly Thr Ile Ala Ile Gln Leu Ala  
155 160 165  
His His Arg Gly Ala Lys Val Ile Ser Thr Ala Cys Ser Leu Glu  
170 175 180  
Asp Lys Gln Cys Leu Glu Arg Phe Arg Pro Pro Ile Ala Arg Val  
185 190 195  
Ile Asp Val Ser Asn Gly Lys Val His Val Ala Glu Ser Cys Leu  
200 205 210  
Glu Glu Thr Gly Gly Leu Gly Val Asp Ile Val Leu Asp Ala Gly  
215 220 225  
Val Arg Leu Tyr Ser Lys Asp Asp Glu Pro Ala Val Lys Leu Gln  
230 235 240  
Leu Leu Pro His Lys His Asp Ile Ile Thr Leu Leu Gly Val Gly  
245 250 255  
Gly His Trp Val Thr Thr Glu Glu Asn Leu Gln Leu Asp Pro Pro  
260 265 270  
Asp Ser His Cys Leu Phe Leu Lys Gly Ala Thr Leu Ala Phe Leu  
275 280 285  
Asn Asp Glu Val Trp Asn Leu Ser Asn Val Gln Gln Gly Lys Tyr  
290 295 300  
Leu Cys Ile Leu Lys Asp Val Met Glu Lys Leu Ser Thr Gly Val  
305 310 315  
Phe Arg Pro Gln Leu Asp Glu Pro Ile Pro Leu Tyr Glu Ala Lys  
320 325 330  
Val Ser Met Glu Ala Val Gln Lys Asn Gln Gly Arg Lys Lys Gln  
335 340 345  
Val Val Gln Phe

<210> 4  
<211> 332  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte Clone No: 2395269

<400> 4  
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20 25 30  
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35 40 45  
Gln Arg Gln Gly Gln Tyr Asp Pro Pro Gly Ala Ser Asn Ile  
50 55 60  
Leu Gly Leu Glu Ala Ser Gly His Val Ala Glu Leu Gly Pro Gly  
65 70 75  
Cys Gln Gly His Trp Lys Ile Gly Asp Thr Ala Met Ala Leu Leu  
80 85 90  
Pro Gly Gly Gly Gln Ala Gln Tyr Val Thr Val Pro Glu Gly Leu  
95 100 105  
Leu Met Pro Ile Pro Glu Gly Leu Thr Leu Thr Gln Ala Ala Ala  
110 115 120  
Ile Pro Glu Ala Trp Leu Thr Ala Phe Gln Leu Leu His Leu Val  
125 130 135  
Gly Asn Val Gln Ala Gly Asp Tyr Val Leu Ile His Ala Gly Leu  
140 145 150  
Ser Gly Val Gly Thr Ala Ala Ile Gln Leu Thr Arg Met Ala Gly  
155 160 165  
Ala Ile Pro Leu Val Thr Ala Gly Ser Gln Lys Lys Leu Gln Met  
170 175 180  
Ala Glu Lys Leu Gly Ala Ala Ala Gly Phe Asn Tyr Lys Lys Glu  
185 190 195  
Asp Phe Ser Glu Ala Thr Leu Lys Phe Thr Lys Gly Ala Gly Val  
200 205 210  
Asn Leu Ile Leu Asp Cys Ile Gly Gly Ser Tyr Trp Glu Lys Asn  
215 220 225  
Val Asn Cys Leu Ala Leu Asp Gly Arg Trp Val Leu Tyr Gly Leu  
230 235 240  
Met Gly Gly Asp Ile Asn Gly Pro Leu Phe Ser Lys Leu Leu  
245 250 255  
Phe Lys Arg Gly Ser Leu Ile Thr Ser Leu Leu Arg Ser Arg Asp  
260 265 270  
Asn Lys Tyr Lys Gln Met Leu Val Asn Ala Phe Thr Glu Gln Ile  
275 280 285  
Leu Pro His Phe Ser Thr Glu Gly Pro Gln Arg Leu Leu Pro Val  
290 295 300  
Leu Asp Arg Ile Tyr Pro Val Thr Glu Ile Gln Glu Ala His Lys  
305 310 315  
Tyr Met Glu Ala Asn Lys Asn Ile Gly Lys Ile Val Leu Glu Leu  
320 325 330  
Pro Gln

<210> 5  
<211> 444  
<212> PRT  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<223> Incyte Clone No: 008879

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20 25 30  
Leu Arg Thr Asp Ser Gly Leu Val Ile Asp Arg Lys Val Tyr Asn  
35 40 45  
Ile Thr Lys Trp Ser Ile Gln His Pro Gly Gly Gln Arg Val Ile  
50 55 60  
Gly His Tyr Ala Gly Glu Asp Ala Thr Asp Ala Phe Arg Ala Phe  
65 70 75  
His Pro Asp Leu Glu Phe Val Gly Phe Leu Lys Pro Leu Leu  
80 85 90  
Ile Gly Glu Leu Ala Pro Glu Glu Pro Ser Gln Asp His Gly Lys  
95 100 105  
Asn Ser Lys Ile Thr Glu Asp Phe Arg Ala Leu Arg Lys Thr Ala  
110 115 120  
Glu Asp Met Asn Leu Phe Lys Thr Asn His Val Phe Phe Leu Leu  
125 130 135  
Leu Leu Ala His Ile Ile Ala Leu Glu Ser Ile Ala Trp Phe Thr  
140 145 150  
Val Phe Tyr Phe Gly Asn Gly Trp Ile Pro Thr Leu Ile Thr Ala  
155 160 165  
Phe Val Leu Ala Thr Ser Gln Ala Gln Ala Gly Trp Leu Gln His  
170 175 180  
Asp Tyr Gly His Leu Ser Val Tyr Arg Lys Pro Lys Trp Asn His  
185 190 195  
Leu Val His Lys Phe Val Ile Gly His Leu Lys Gly Ala Ser Ala  
200 205 210  
Asn Trp Trp Asn His Arg His Phe Gln His His Ala Lys Pro Asn  
215 220 225  
Ile Phe His Lys Asp Pro Asp Val Asn Met Leu His Val Phe Val  
230 235 240  
Leu Gly Glu Trp Gln Pro Ile Glu Tyr Gly Lys Lys Lys Leu Lys  
245 250 255  
Tyr Leu Pro Tyr Asn His Gln His Glu Tyr Phe Phe Leu Ile Gly  
260 265 270  
Pro Pro Leu Leu Ile Pro Met Tyr Phe Gln Tyr Gln Ile Ile Met  
275 280 285  
Thr Met Ile Val His Lys Asn Trp Val Asp Leu Ala Trp Ala Val  
290 295 300  
Ser Tyr Tyr Ile Arg Phe Phe Ile Thr Tyr Ile Pro Phe Tyr Gly  
305 310 315  
Ile Leu Gly Ala Leu Leu Phe Leu Asn Phe Ile Arg Phe Leu Glu  
320 325 330  
Ser His Trp Phe Val Trp Val Thr Gln Met Asn His Ile Val Met  
335 340 345

Glu Ile Asp Gln Glu Ala Tyr Arg Asp Trp Phe Ser Ser Gln Leu  
 350 355 360  
 Thr Ala Thr Cys Asn Val Glu Gln Ser Phe Phe Asn Asp Trp Phe  
 365 370 375  
 Ser Gly His Leu Asn Phe Gln Ile Glu His His Leu Phe Pro Thr  
 380 385 390  
 Met Pro Arg His Asn Leu His Lys Ile Ala Pro Leu Val Lys Ser  
 395 400 405  
 Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Glu Lys Pro Leu Leu  
 410 415 420  
 Arg Ala Leu Leu Asp Ile Ile Arg Ser Leu Lys Lys Ser Gly Lys  
 425 430 435  
 Leu Trp Leu Asp Ala Tyr Leu His Lys  
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<210> 6  
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 <213> Homo sapiens

<220>  
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 <223> Incyte Clone No: 2274011

<400> 6

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 Val Leu His Tyr Arg Glu Gly Leu Gly Trp Asp Gly Ser Ala Leu  
 35 40 45  
 Glu Phe Asn Trp His Pro Val Leu Met Val Thr Gly Phe Val Phe  
 50 55 60  
 Ile Gln Gly Ile Ala Ile Ile Val Tyr Arg Leu Pro Trp Thr Trp  
 65 70 75  
 Lys Cys Ser Lys Leu Leu Met Lys Ser Ile His Ala Gly Leu Asn  
 80 85 90  
 Ala Val Ala Ala Ile Leu Ala Ile Ile Ser Val Val Ala Val Phe  
 95 100 105  
 Glu Asn His Asn Val Asn Asn Ile Ala Asn Met Tyr Ser Leu His  
 110 115 120  
 Ser Trp Val Gly Leu Ile Ala Val Ile Cys Tyr Leu Leu Gln Leu  
 125 130 135  
 Leu Ser Gly Phe Ser Val Phe Leu Leu Pro Trp Ala Pro Leu Ser  
 140 145 150  
 Leu Arg Ala Phe Leu Met Pro Ile His Val Tyr Ser Gly Ile Val  
 155 160 165  
 Ile Phe Gly Thr Val Ile Ala Thr Ala Leu Met Gly Leu Thr Glu  
 170 175 180  
 Lys Leu Ile Phe Ser Leu Arg Asp Pro Ala Tyr Ser Thr Phe Pro  
 185 190 195  
 Pro Glu Gly Val Phe Val Asn Thr Leu Gly Leu Leu Ile Leu Val  
 200 205 210  
 Phe Gly Ala Leu Ile Phe Trp Ile Val Thr Arg Pro Gln Trp Lys

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<213> Homo sapiens
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<220>  
<221> misc\_feature  
<223> Incyte Clone No: 321510

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<211> 2260
<212> DNA
<213> Homo sapiens
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<220>  
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ctacacctgac tacttaaaaag caaaaagagtt aattaagtat tactaattgg tgatactaga 180  
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 aatcaactaaa ccttggccat ggtcacttcc tctttccaa tctctgtggc agttttgcc 300  
 ctaataacc ctcaggttgg tactcaggac agttttatag ctgcagtgtt tgaacatgtc 360  
 gtcatttgc caaataaaaac agaaaacacca gtttctcagg aggtgcctt gaatctcatg 420  
 aacgagaata tagacattct ggagacagcg atcaagcagg cagctgagca gggtgctcga 480  
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 cctgggtgtt tgggtcagat aaatgaagat caaactccag ctccagcctc atttgcttga 2100  
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 tccctttgac attaaagact atttgaatttca aaaaaaaaaa 2260

<210> 9  
 <211> 1471  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <223> Incyte Clone No: 1942326

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 aggaagatct tcctgttaca gaggataact ttgtggaaact tcaagttaaa gcttgcgtc 180  
 tgagccagat aaatacaaag cttctggcag aaatgaagat gaaaaaggat ttatttcctg 240  
 ttgggagaga aattgttgcgatttgcgtt atgttgcgtt atgttgcgtt ttcatttcaac 300  
 cagatgttgcgatttgcgtt attttgcgtt tggactctgc agaccctggc ctttgcgtt 360  
 ttgttagagt acatgagcat tacttgggtt ataaaccaga aaaggtcaca tggacggaaag 420  
 cagcagggaaatcggat ggagtgcgtt cctatacagc tctgcattt ctttgcattt 480  
 tctctcctgg aaaatcggat tggagcaag tgcatttgcgtt acaatagctt 540

ttcagttac acatcataga ggagccaaag tgatttcaac agcatgcagc cttgaagata 600  
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 aagaaaaacct tcagttggat cctccagata gccactgcct tttcctcaag ggagcaacgt 900  
 tagcttcctt gaatgatgaa gtttggaaatt tgtaaaatgt acaacaggga aatatatctt 960  
 gtatcttaaa ggtatgtatg gagaagttat caactgggtgt tttcagacct cagttggatg 1020  
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 gaaaaaaagca agttgttcaa tttttaatttt ctttttctc agacctcagt cggatgaaca 1140  
 tattccagta tttgaagcca gaattttttt tggaaattgt tgagaaaaac caaggaagat 1200  
 aaaacaaggta gcattttaa gcacgtttct ctgctaagac aagatgctca gttgacacat 1260  
 ttgaaaagtg tttgaaaaat tcttgcgaa atgatcaaga taattctata attaacatct 1320  
 taagggaaatt tttctaaaaa ctttttcatt gtttctatat attttgcggg tgctataaaaa 1380  
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&lt;210&gt; 10

&lt;211&gt; 1215

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; misc\_feature

&lt;223&gt; Incyte Clone No: 2395269

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&lt;211&gt; 3184

&lt;212&gt; DNA

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&lt;223&gt; Incyte Clone No: 008879

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 35 40 45  
 Glu Trp Ala Lys Glu His Pro Gly Gly Asp Ala Pro Leu Ile Asn  
 50 55 60  
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 65 70 75  
 Gly Thr Ala Trp Lys His Leu Asp Lys Leu Phe Thr Gly Tyr His  
 80 85 90  
 Leu Lys Asp Tyr Gln Val Ser Asp Ile Ser Arg Asp Tyr Arg Lys  
 95 100 105  
 Leu Ala Ser Glu Phe Ala Lys Ala Gly Met Phe Glu Lys Lys Gly  
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WO 00/00622

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Gly Ile Ser Ile Ala Trp Trp Lys Trp Thr His Asn Ala His His		
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Ile Ala Cys Asn Ser Leu Asp Tyr Asp Pro Asp Leu Gln His Leu		
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Phe Val Ser Tyr Gln His Tyr Leu Tyr Tyr Pro Ile Met Cys Val		
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Ala Arg Val Asn Leu Tyr Leu Gln Thr Ile Leu Leu Leu Ile Ser		
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Lys Arg Lys Ile Pro Asp Arg Gly Leu Asn Ile Leu Gly Thr Leu		
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Val Tyr Val Gly Pro Pro Lys Gly Asp Asn Trp Phe Glu Lys Gln		
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